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GM CELL BASED CONTROL LOOPS

ABSTRACT OF THE DISCLOSURE

Various circuit techniques employ a transconductance (gm) cell in control loops to implement circuits such as phase locked loops and delay locked loops that are capable of operating at ultra high frequencies with improved precision and noise performance. The gm cell is designed to operate on an analog input signal with a very small swing and more gradual transition edges. These characteristics allow implementation of high frequency circuits and systems including, for example, transceivers for fiber optic channels, disk driver electronics and the like.

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